

UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : 6,841,822 B2  
DATED : January 11, 2005  
INVENTOR(S) : Violette

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Delete Title page illustrating figure, and substitute therefor new Title page illustrating figure (attached).

Delete drawing sheets 5-7, and substitute therefor drawing sheets 5-7, with the attached sheets.

Column 9,

Line 1, please delete "tor" before "having" and insert -- ter --.

Line 3, please delete " pulldown" after "second" and insert -- pullup --.

Signed and Sealed this

Twenty-seventh Day of September, 2005



JON W. DUDAS  
Director of the United States Patent and Trademark Office

(12) United States Patent  
Violette(10) Patent No.: US 6,841,822 B2  
(45) Date of Patent: Jan. 11, 2005

## (54) STATIC RANDOM ACCESS MEMORY CELLS

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(73) Assignee: Micron Technology, Inc., Boise, ID (US)

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: 10/801,334

(22) Filed: Mar. 15, 2004

## (65) Prior Publication Data

US 2004/0173841 A1 Sep. 9, 2004

## Related U.S. Application Data

(62) Division of application No. 10/300,175, filed on Nov. 19, 2002, now Pat. No. 6,753,581, which is a division of application No. 09/563,429, filed on May 5, 2000, now Pat. No. 6,730,107, which is a continuation of application No. 08/960,875, filed on Oct. 30, 1997, now Pat. No. 6,103,579, which is a continuation of application No. 08/819,546, filed on Mar. 17, 1997, now abandoned, which is a continuation of application No. 08/594,747, filed on Jan. 31, 1996, now abandoned.

(51) Int. Cl. 7 ..... H01L 29/788  
 (52) U.S. Cl. .... 257/315; 257/274; 257/314;  
 257/316; 257/338  
 (58) Field of Search ..... 257/274, 314,  
 257/315, 316, 338; 365/200

## (56) References Cited

## U.S. PATENT DOCUMENTS

3,967,988 A 7/1976 Davidsohn ..... 148/187  
 4,253,162 A 2/1981 Hollingsworth ..... 365/175  
 4,661,831 A 4/1987 Schmitt-Landsiedel et al. .. 357/

4,823,319 A	4/1989	Pfennings .....	365/189
4,849,366 A	7/1989	Hsu et al. ....	437/42
4,995,001 A	2/1991	Dawson et al. ....	365/154
5,097,448 A	3/1992	Segawa .....	365/200
5,153,852 A	10/1992	Terrill .....	365/154
5,182,810 A	1/1993	Bardling et al. ....	395/750
5,239,502 A	8/1993	Carlaudi .....	365/154
5,287,301 A	2/1994	Redgrave .....	365/154
5,307,142 A	4/1994	Corbett et al. ....	365/156
5,426,614 A	6/1995	Harward .....	365/225.7
5,535,161 A	7/1996	Bateman .....	365/208
5,896,336 A	4/1999	McClure .....	365/205
5,949,706 A	9/1999	Chang et al. ....	365/156
6,081,464 A	6/2000	Marr .....	365/201
6,103,579 A	8/2000	Violette .....	438/219
6,301,148 B1	10/2001	Violette .....	365/156
6,383,848 B1	5/2002	Violette .....	438/142

## FOREIGN PATENT DOCUMENTS

JP	59-227087	12/1984
JP	63-166260	7/1988

Primary Examiner—Richard Elms

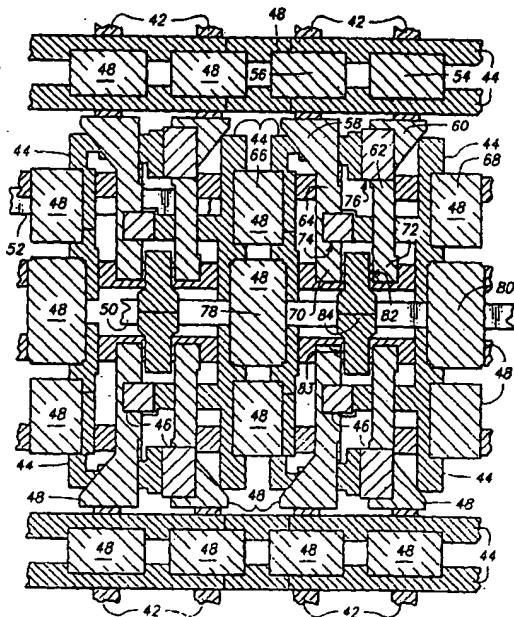
Assistant Examiner—Douglas Menz

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## (57) ABSTRACT

A static random access memory cell comprising a first inverter including a first p-channel pullup transistor, and a first n-channel pulldown transistor in series with the first p-channel pullup transistor; a second inverter including a second p-channel pullup transistor, and a second n-channel pulldown transistor in series with the second n-channel pullup transistor, the first inverter being cross-coupled with the second inverter, the first and second pulup transistors sharing a common active area; a first access transistor having an active terminal connected to the first inverter; a second access transistor having an active terminal connected to the second inverter; and an isolator isolating the first pullup transistor from the second pullup transistor.

11 Claims, 7 Drawing Sheets

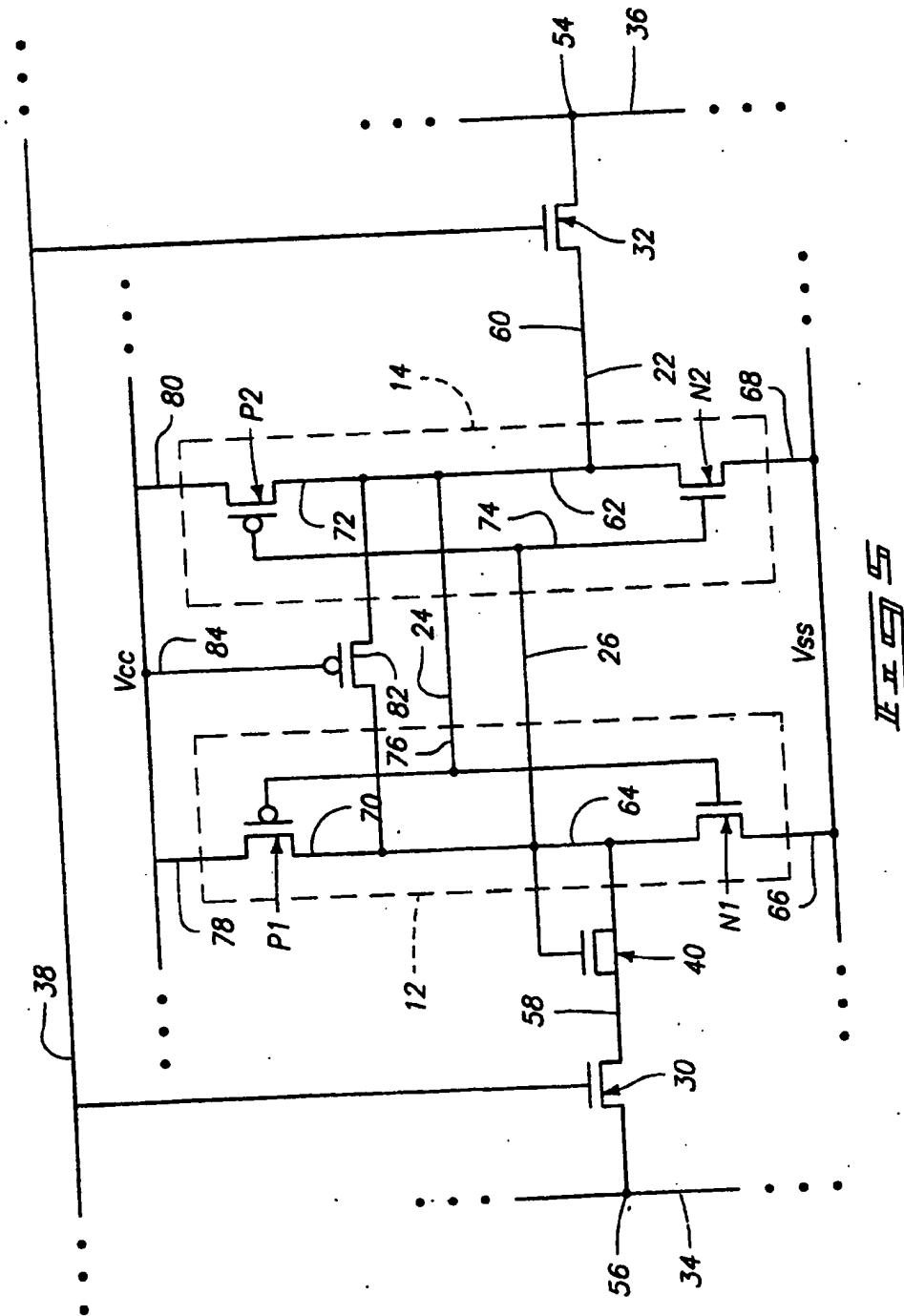


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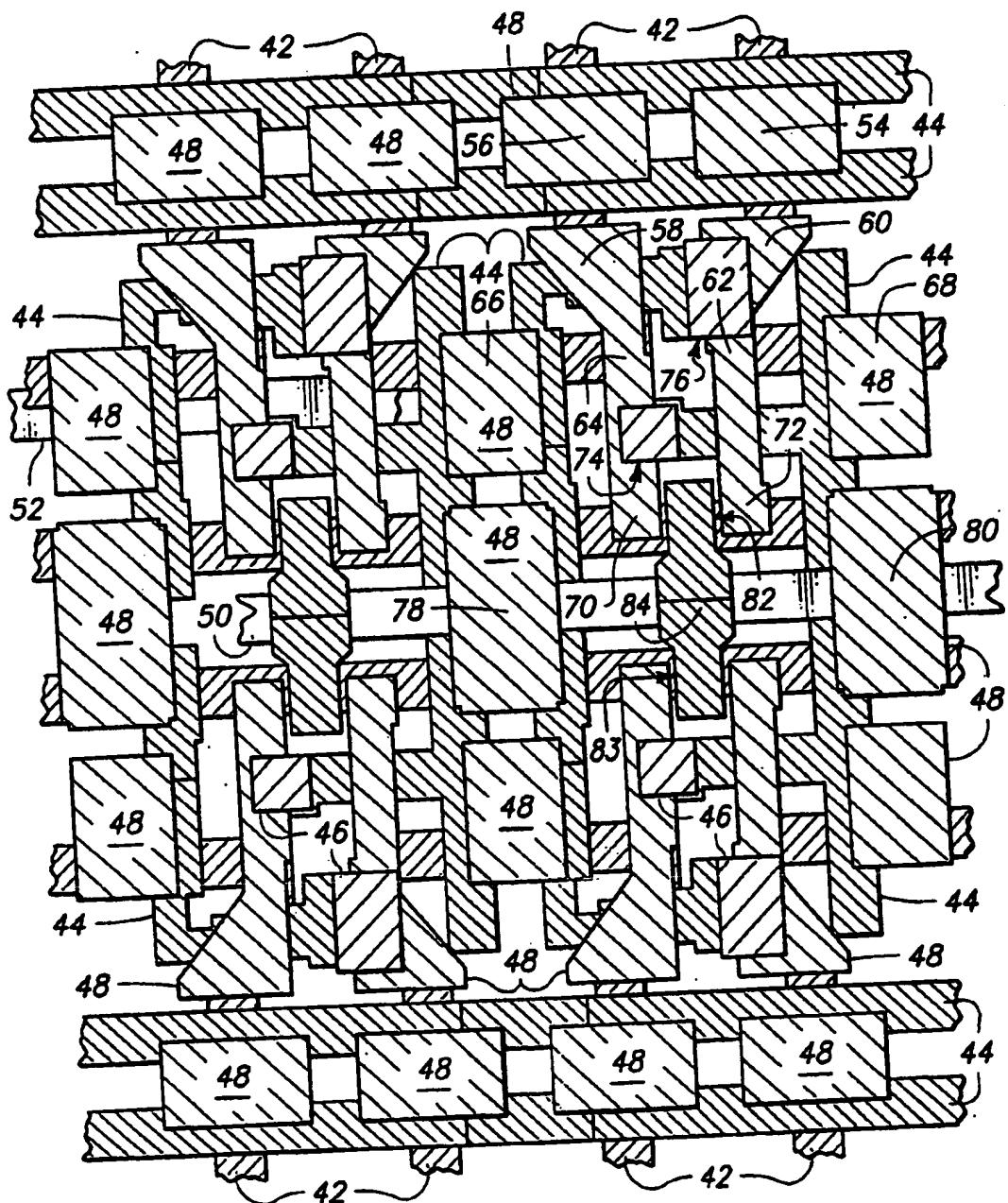


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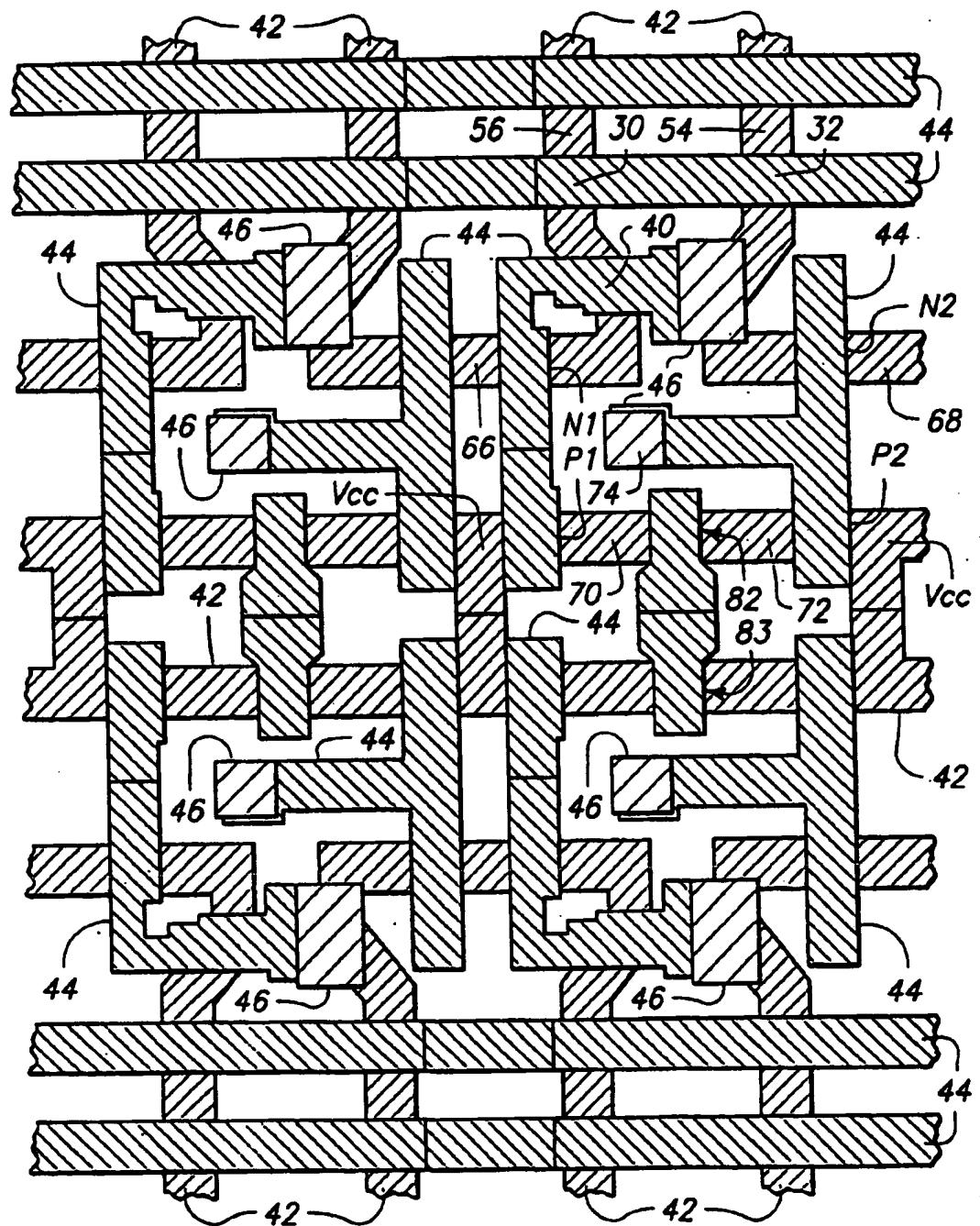


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